



Siemens MAGNETOM Avanto 1.5T

RELOCATABLE MRI BUILDING
PLANNING GUIDE
MR12



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Rental Solutions from Scandinavian Medical Solutions

At Scandinavian Medical offer solutions that differ from other rental solutions on the market, providing a flexible, cost-effective solution tailored to your requirements, timeline, and budget.

Our team has developed a unique and flexible rental concept, which provides you with a wide selection of customized alternatives to high-cost OEM equipment at a fixed monthly rate. There are no heavy investments, no risks, and no residual value.

We offer short – and long-term rental solutions - from fixed-site to trailers and modular rental solutions. Regardless of the challenges you face - be it replacement of equipment, breakdowns, bridging periods, or back-locks - we offer excellent solutions that ensure you can avoid downtime and optimize your scan capacity.

System Specifications

- **Brand:** Siemens
- **Model:** Avanto 1.5T
- **YOM:** 2009
- **Channels:** 18 Channels
- **Gradients:** SQ Gradients
- **Coils:** Body Matrix 1, Body Matrix 2, Head Matrix, Neck Matrix, Spine Matrix, PA Matrix, 4ch Flex Interface, 4ch Flex S, 4ch Flex L, 8ch Knee, 8ch Wrist, Baseplate Shoulder, Shoulder Large, Shoulder Small
- **Software Version:** VB19
- **Software Options:** Neuro Suite, Tim Application Suite, Body Suite, Angio Suite, Cardiac Suite, Ortho Suite, Onco Suite, Pediatric Suite, Scientific Suite, Breast Suite, Syngo General License, Matrix Mode, 3D usage license, 3D MPR, 3D MIP, 3D SSD, Argus Viewer, Worklist, MDDW, Phoenix ZIP, Syngo Remote Assist, Inline 3D distortion correction, Image Filter, MPPS, 3D distortion correction, Inline Bold Imaging, Spectroscopy evaluation, Flow Quantification, MR Neuro Perfusion Evaluation Protocols, Argus Flow, 3D Pace, Spectroscopy 2D CSI, Advanced Cardiac, MR Bold evaluation, Breast Biopsy, iPAT Extensions, MR 3D Inline fMRI, TIM Whole Body, Inline diffusion, Inline Perfusion, MR 3D offline fMRI, CISS & DESS, I-Class, Optimized Protocols for EC, Spectroscopy 3D CSI, 3D Volume of Interest, 3D VRT, 3D VRT editor, Adv. Neuro Perf. Eval, Advanced functional Neuro, Argus flow Analysis, Argus Function, Argus Main, Argus VF Analysis, BLADE, Chemical shift Imaging, iPAT Plus, MapIt, Native, ROW, Spectroscopy PostP, Spectroscopy SV, SQ Engine, SWI, Tractography, TWIST





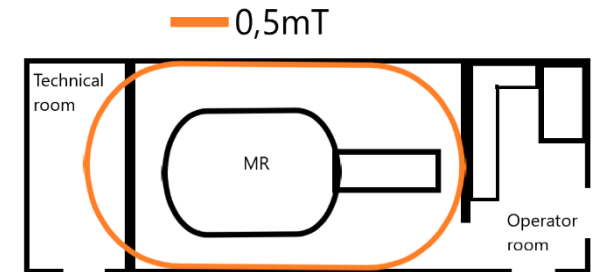






Inventory

- Housing – wooden panels with stone wool, color white.
- Doors in operator room with interior blinds
- Door to technical bridge - aluminum filled with lamellas.
- Magnetic shielding - fringe field not exceeding 0,5 mT outside of building.
- RF room in accordance with the system requirements
- Chiller incl. cooling water installation.
- Air-conditioning with temperature control.
- Electrical installations.



Equipment List

- 1 planning guide
- 4 lifting eyes
- 1 aluminum Fire Extinguisher (in technical room)
- 1 ladder (in technical room)

Dimensions & Weight

MRI building with its dimensions you can see in Figure 1.

The height of container is **3,40m**.

The total weight of a building including the MRI Siemens Avanto 1.5T system is about **33 tons**

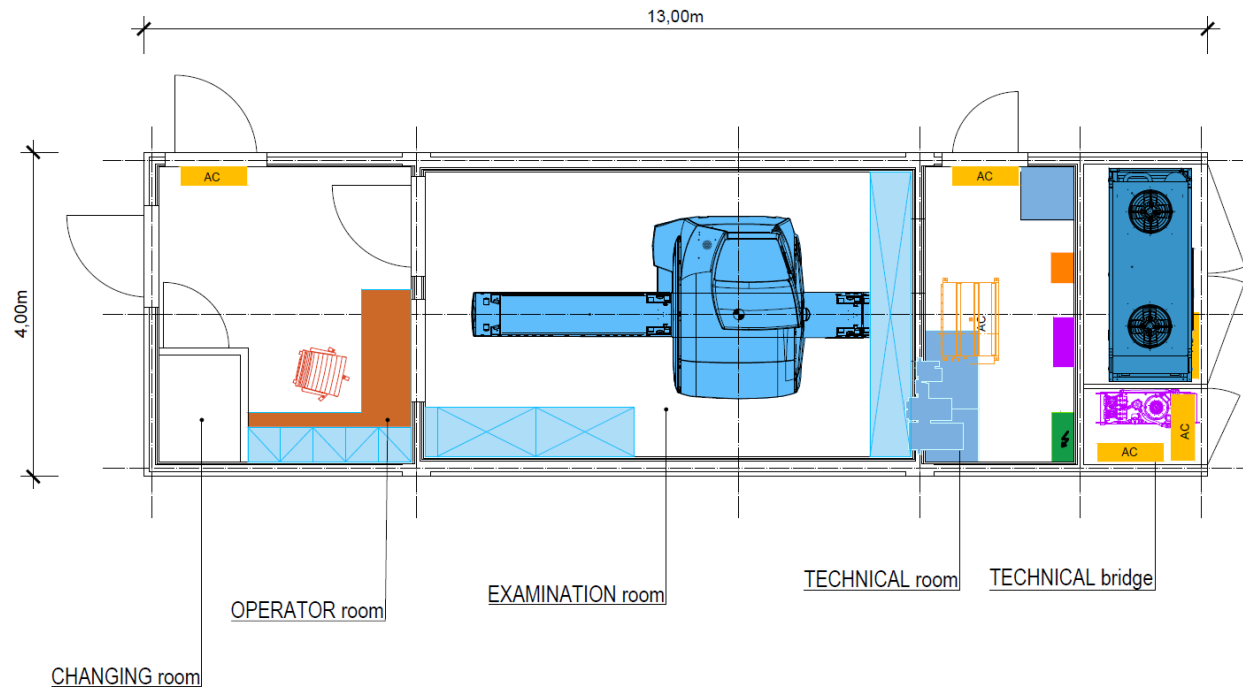


Figure 1 MRI building (can differ in furnishing and positioning of doors)

Access to The Building

The relocatable MRI building can be accessed via three doors:

- Two doors leading to the operator room (patient and staff access)
- One door leading to the technical room (service access).

On the rear wall there are service doors to the technical bridge. On the left wall you can find handle for ladder, that gives access to the roof. Service access can be found in Figure 3. Mentioned doors you can find in Figure 2. Connection points you can find in Figure 3 and 4. Drainage you can find in Figure 5.

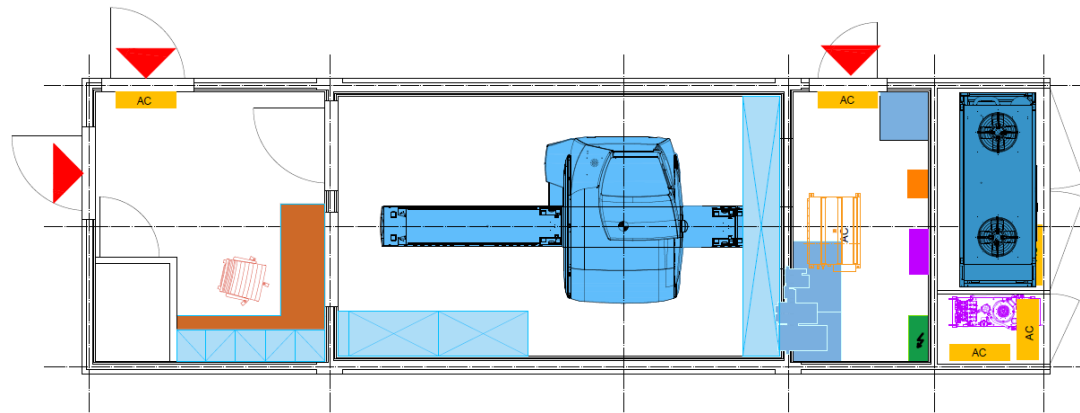


Figure 2 Entrances (can differ in furnishing and positioning of doors)

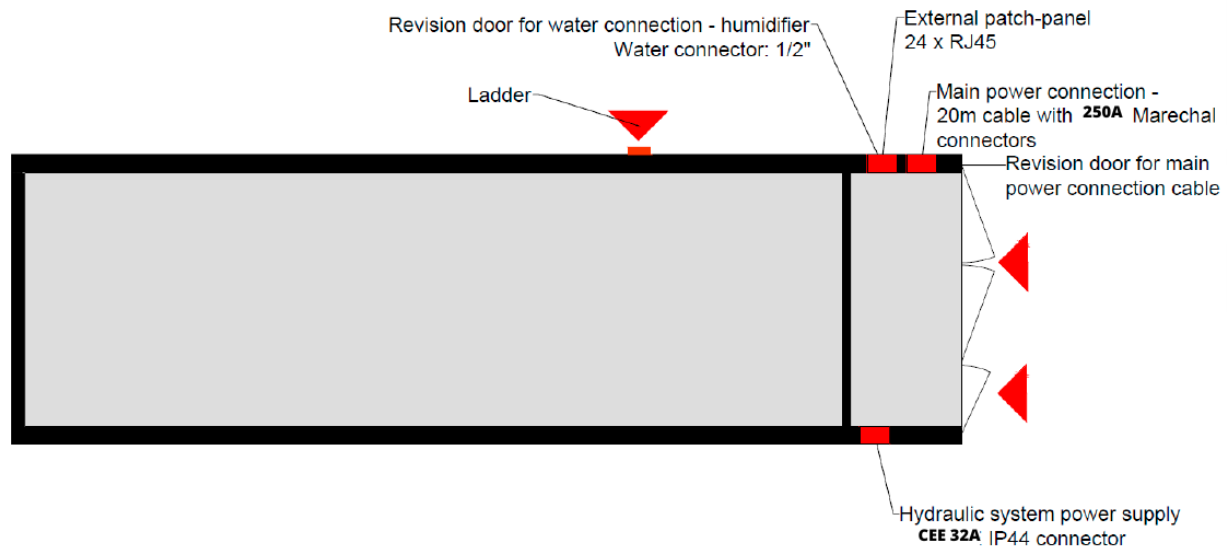


Figure 3 Service access and connections

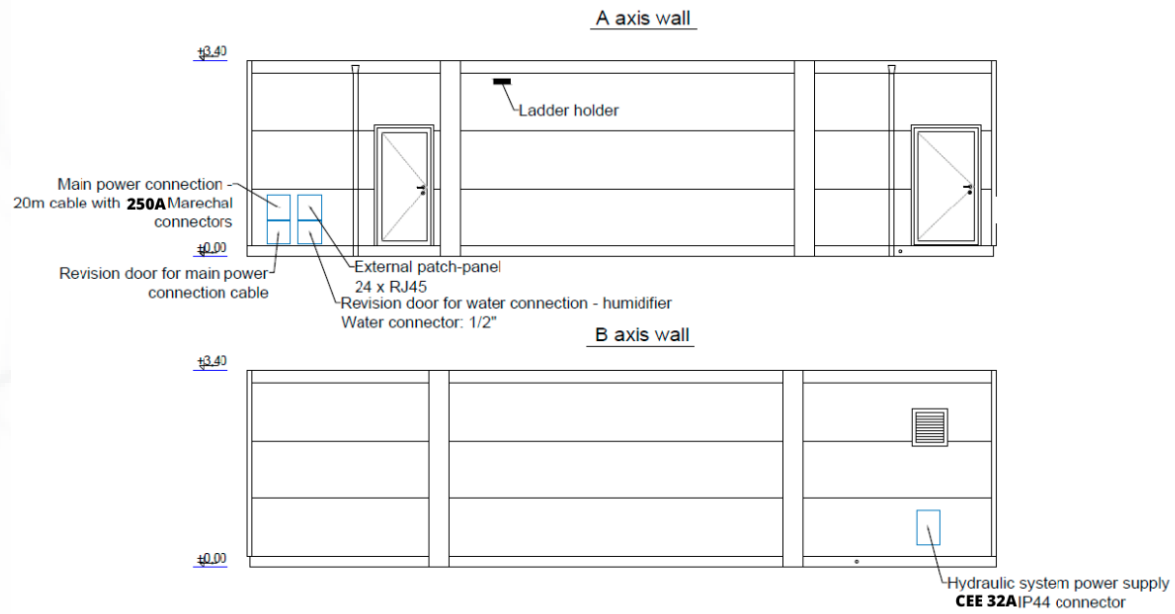


Figure 4 Connection points

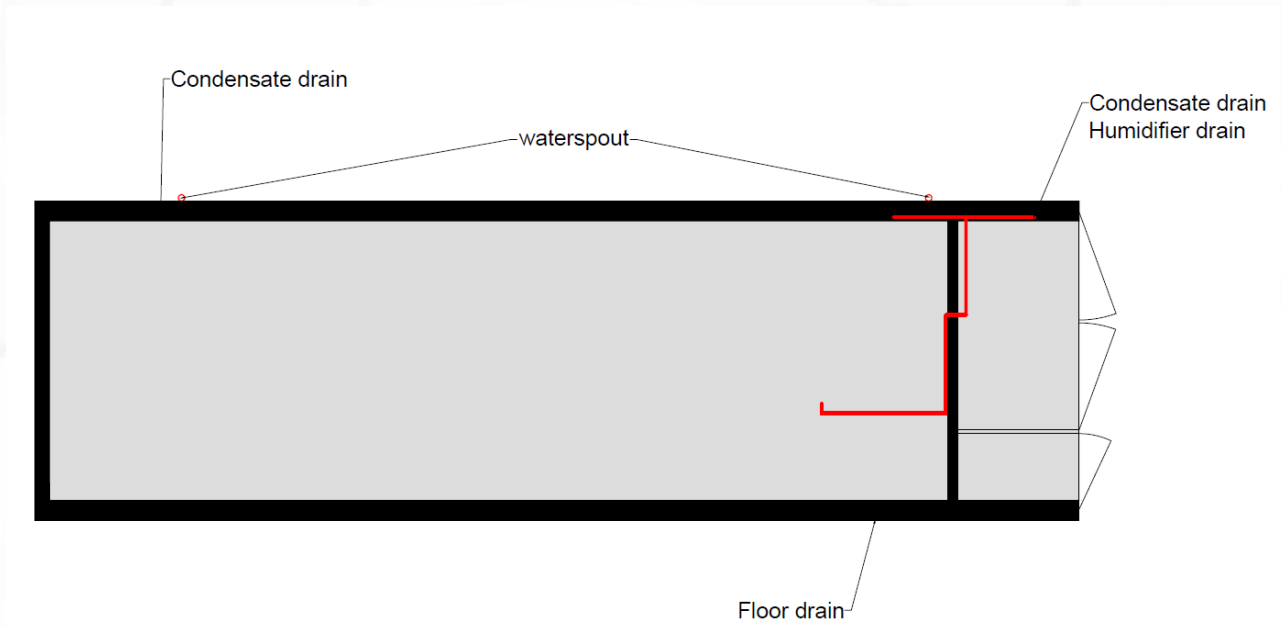


Figure 5 Drainage



Figure 5.1 Service doors on the back

Environmental Requirements

All necessary administrative consents needed for the unit installation in the indicated area and for entry and unloading should be provided. Also, permission to enter and work the crane from 6am to 6pm must be provided.

It is necessary to prepare and secure the access road to the entry of heavy equipment and the foundation of the unit. Moreover, maximum 1 % terrain deferral. If more, site preparation with ground leveling is to be handled prior to installation.

Minimum Required Area

To enable access to all parts of the MRI building you need to provide suitable area.

Required area for the unit is: 15,70 m x 5,70 m and is shown in Figure 6. The height of container is 3,40m.

Contact our technical department for the detailed minimum required area.

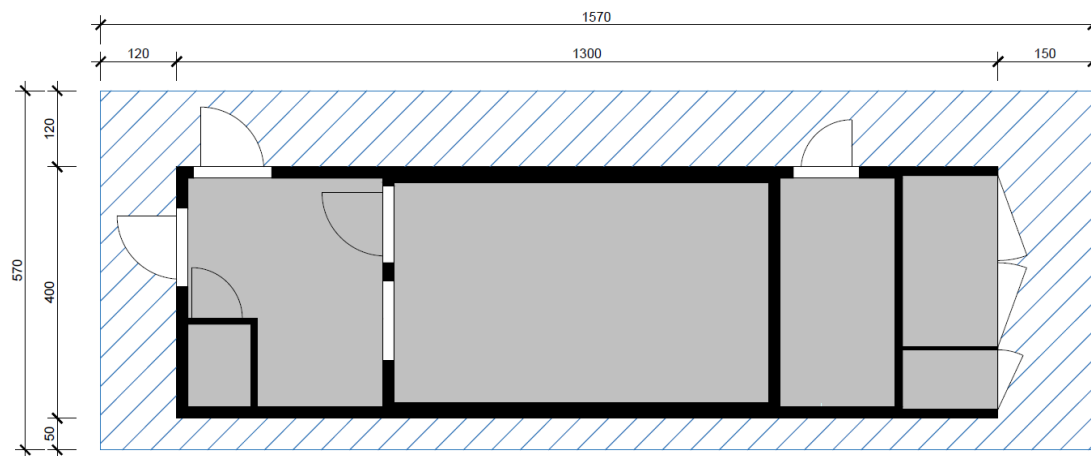


Figure 6 Minimum required area

Minimum Container Sitting Conditions

A level ground should be prepared for unit installation with an accuracy of 10mm. Typical foundation is shown in Figure 7. Detailed information about preparing the ground can be found in the technical documentation. Figure 8 shows example of building foundation.

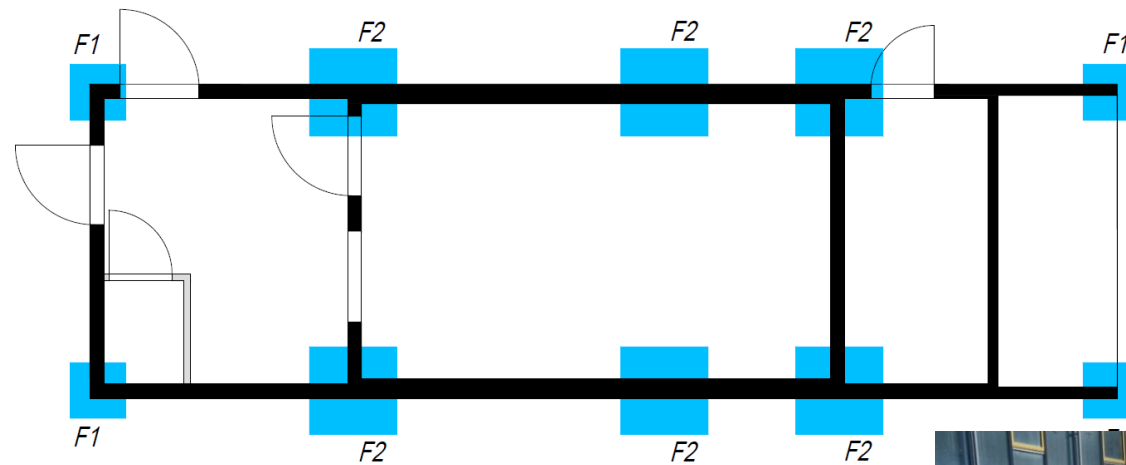


Figure 7 Block foundation

F1 – 0,7x0,7m

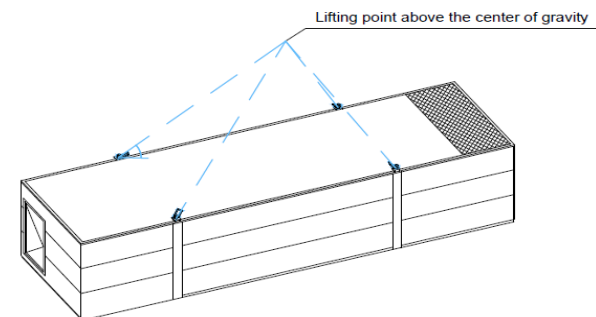
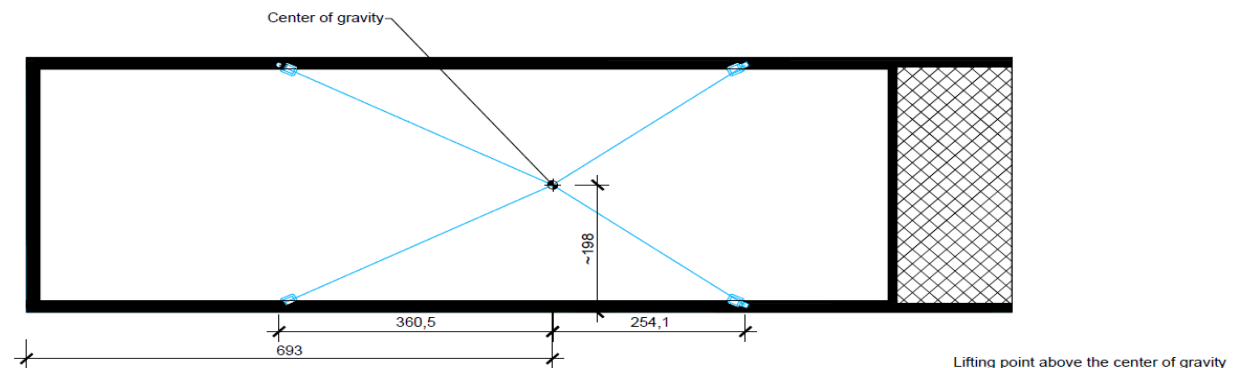
F2 – 1,1x1,1m

Figure 8 Example of block foundation



Conditions of Container Lifting Guidelines

The unit should be lifted by 4 lifting brackets mounted on the upper frame. The lifting scheme you can see in the Figure 10. The crane selection is considered individually for each project.



CONDITIONS OF CONTAINER LIFTING

GUIDELINES:

- the container must be lifted by 4 lifting brackets 20T mounted on the upper frame
- Acceleration value while container lifting should be insignificant
- four-lifting slings of container lifting should be adjusted according to the center of gravity of construction location
- countersink angle between slings must not be bigger than 90°
- Before lifting, the container's roof should be cleared of snow.
- Container lifting should be carried out freely - the construction must not be covered with ground, frozen or jammed.
- Container should not be lifted when wind exceeds 10m/s

IT IS PROHIBITED TO:

- Be inside or on the upper layers of container for people
- lift the container under the high-voltage lines
- be under the jib while lifting and moving the construction hanging on the hooks
- carry the construction above people and driver's compartment
- leave the hanging container without supervision after work finishing or during the breaks
- lift the container with the equipment unprotected inside

APPROXIMATED CONTAINER WEIGHT: 33T.

MRI Building Connection

The location of connection boxes can be found in Figure 3 and 4. In Figure 17 and 18 there are presented their dimensions and photo.



Figure 17 Connection boxes

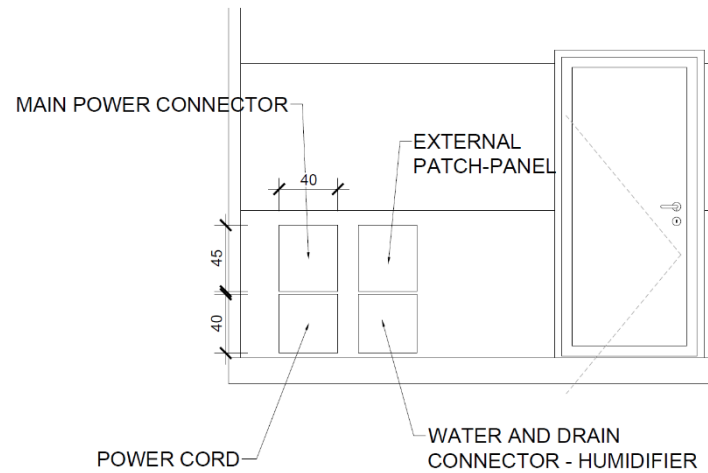


Figure 18 Dimension of connection boxes

Water connection

As the unit is equipped with a humidifier, running water should be brought into the building. The water connector is ½". The pipe is equipped with a water heating system in case of low temperatures. To connect the heater, you must insert the plug into the socket located on technical bridge.



Figure 19 Water connection

Main Power Connection

Applying power to the main power connection (Figure 3 and Figure 17), connecting the building to electricity, and performing protective measurements after connecting the power supply are the responsibility of the user. These activities must be performed by a person with appropriate qualifications.

Connecting the building should take place within 2 hours from setting up the building.

Power connection details:

Building with MRI system: 250A

Mains supply: 400V

Frequency: 50/60Hz

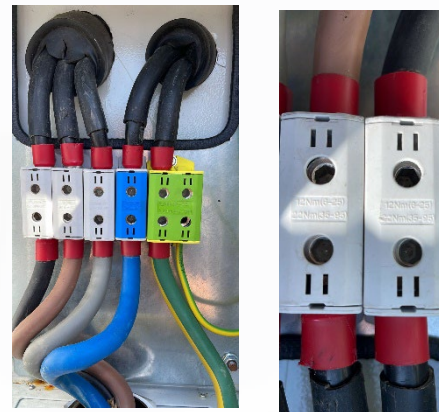
The system could be connected with 2 options:

1. direct screwed connection max. 95mm²
2. with the connected 20m main cable including power plug – Marechal DS2 (is included with the system)

Possibility of main power supply.

Option 1 – from the side

Option 2 – from the ground



Ethernet Connection

To connect the unit with the local LAN network, there are patch panels (8xRJ45,6cat.) in the building. The location of the external patch panel is shown in Figure 3 and Figure 20.

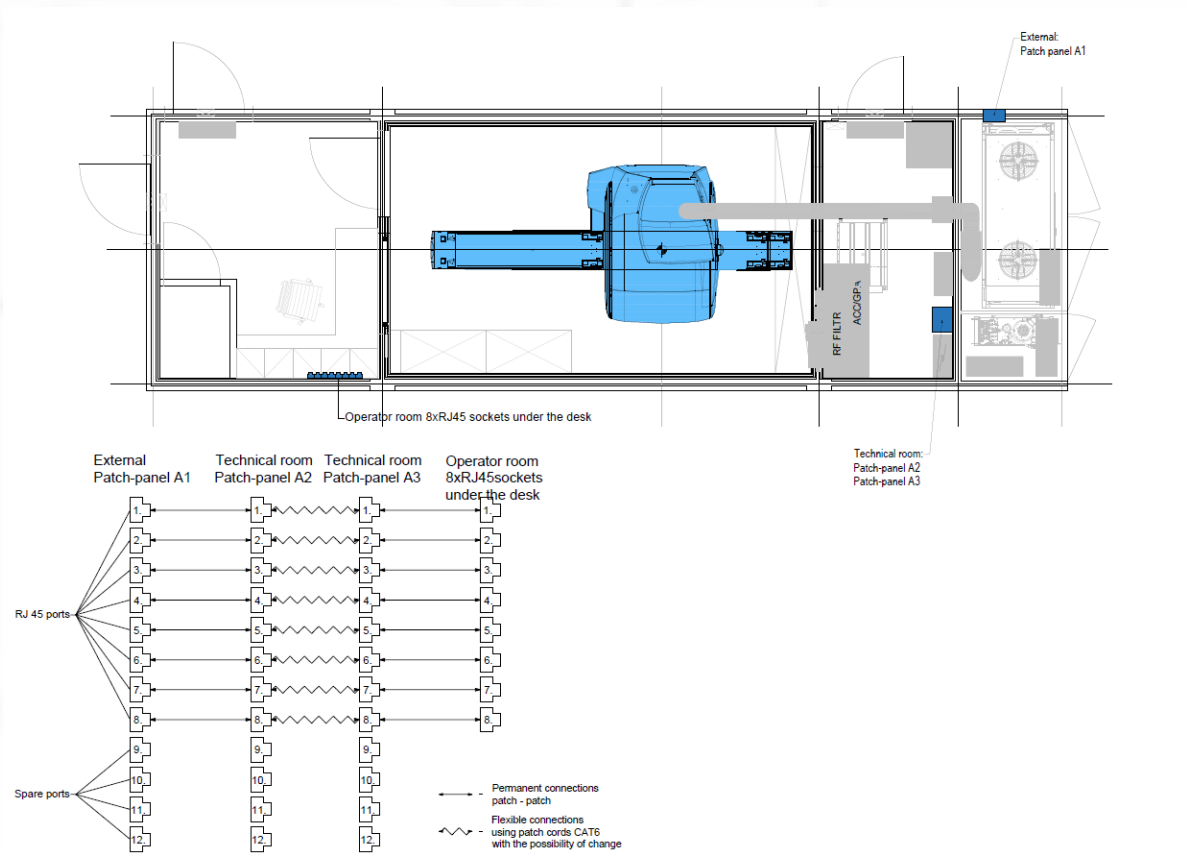


Figure 20 Network connection

Contact

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